

NRO review(s) completed.

SECRET

### Analysis of PC-14 Processor

The machine, manufactured by HI-Speed Equipment for the ITEX Corporation to the design of Artisan Metals, is a variable speed continuous 70mm processor. We have been testing the proto type model for several months and if any additional machines are to be manufactured we would suggest that the following modifications be considered.

1. There are no splicing facilities within the feed cabinet, i. e., no block, tape holder, etc.
2. Back tension must be frequently adjusted, particularly with long rolls. But the tension adjustment is hidden behind any spool greater than 12 inches.
3. The carriage is quite heavy and is not counter weighted. Unless tracking and tension are exact the weight of this carriage will break the film when it drops. We believe that it should either be counterbalanced or dashpotted to prevent too sudden a drop.
4. Maintenance, threading, repairs, etc., are very difficult with the wet sections designed as they are. When a film break occurs it is almost impossible to repair and rethread the machine to save any material being processed. It would be better to make the access doors full length.
5. We do not believe that the densitometer can be used to determine processing requirements as it fluctuates widely and rapidly and cannot be easily evaluated.
6. The intake and exhaust of the dryer are both at the top of the cabinet and air circulation is very poor.
7. The takeup motor does not have enough torque to take up the large spools for which this machine was designed. We further feel that it is inadvisable to install the takeup motor within the drying cabinet.
8. It is extremely difficult to keep slack from building up within the machine and to keep the film from leaving the rollers. We have changed the pulley size on the drive roll in the dryer

SECRET

SECRET

#### Analysis of FC-14 Processor

so as to overdrive the film at this point. This has considerably helped the slack condition locally and we suspect that the speed of the other drives should be changed to overdrive.

9. The soft rubber covering of the rollers tends to climb up on the flange of the rolls and otherwise bunch up so as to mark the film.
10. We feel that the rollers should be made in some other fashion as they now tend to revert to their original shape with age. They also deform quite easily in the drying cabinet.
11. Strainers should be installed in all pump in-takes.

Of all of the above, the principle difficulty seems to be that of maintaining proper tension through out the machine.

It is absolutely impossible for a machine of this kind to transport thin base film through it because of the tendency of the film to ride up on the flanges. We also question whether continuous transporting of perforated film is feasible. We have not, however, made any extensive tests.

SECRET

**SECRET**

**Analysis of ITEX Printer**

This is a Photo Devices 70mm printer modified by ITEX and incorporates exposure control.

This exposure control is difficult to keep in adjustment and requires reasonably frequent maintenance. Some shutter "bounce" occurs at frame lines.

Other than the above we have only two comments:

1. The raw stock magazine scratches the film.
2. We feel that the proposed threading diagram is incorrect and that the raw stock should go directly to the printing drum.

With the above changes and more experience with the exposure control, the printer should be an excellent machine.

*ENCL #2*

**SECRET**

RLG  
10/31/58